AF

PATENT
Attorney Docket No. 01165.0782-00000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Yoshinori KAMI et al.	)	Group Art Unit: 1772
	)	
Application No.: 09/530,447	)	Examiner: M. Patterson
	)	
Filed: April 28, 2000	)	Confirmation No.: 6878
	)	
For: AIR BAG	)	

Attention: Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

REPLY BRIEF UNDER BOARD RULE § 41.41

In support of the Notice of Appeal filed August 7, 2006, and in reply to the Examiner's Answer filed July 16, 2007, and further to Board Rule 41.41, Appellants present this reply brief.

If any fees are required, Appellants request that the required fees and payment be charged to Deposit Account No. 06-0916.

Argument

Although the Examiner's Answer does not include a new ground of rejection, it does include several new arguments and another translation of the inadequate Toray Industries ("Toray") publication. This late-filed translation has been provided after the close of prosecution without explanation of its need, how it differs from the translation of Toray in Exhibit 1 of the Appeal Brief, or to what extent, if any, the Examiner intends to

rely upon it. Thus, the Board is respectfully requested either to ask the Examiner to withdraw this document or, alternatively, to let this document remain but refuse to consider it. Instead, the Board can direct its attention as needed to Exhibit 1 of the Appeal Brief, which is a translation of Toray provided by the PTO during prosecution.

I. IN RE BOESCH AND SLANEY IS THE BASIS FOR THE "OPTIMIZATION" CATCH-ALL

The Examiner in his Answer devotes over half of the Grounds and Arguments portion to a recitation of the earlier Office Action of June 30, 2005, which preceded the final rejection of April 5, 2006. This earlier Office Action relied upon In re Boesch and Slaney for rejections based on "optimization," although its reliance was misplaced. In the paragraph beginning on page 12, line 4, of the Appeal Brief, Applicants did surmise that this case was likely the source for the term "optimization." Nevertheless, because this case was adequately distinguished in the Appeal Brief, it will not be discussed further here. It is submitted the Board will recognize that the deficiencies of Toray cannot be ignored regardless of how often the cry of "optimization" or "routine optimization" is leveled at the claims.

II. THE NEW CHALLENGES TO APPELLANTS' INVENTION LACK MERIT

First Meritless Challenge

The first new challenge to the invention appears in the first paragraph on page 8 of the Examiner's Answer. The Examiner questions where the stated range of Toray's fabric strength at break is disclosed, this range being 1561-1827 N/2.54 cm. In reply, the challenged range is disclosed under Toray Examples (TE) in the third row entitled

"Strength at break" of Exhibit 3 (Table B) of the Appeal Brief. There are actually two rows--one before conversion and the other after conversion. The source for the pre-conversion numbers is [Table 4] on page 7 of the PTO translation of Toray (Exhibit 1). All claims in the case recite a fabric strength at break in a range from 740 to 1010 N/2.54 cm. There is no description or suggestion in Toray of an air bag with a tensile strength within this range.

This property of tensile strength is related to the fineness of the yarn which in Toray is limited to 210 denier (231 decitex) as the lower limit in order to satisfy mechanical properties such as tensile strength. The Examiner argues on page 7 of his Answer that Toray does not state that it would be impossible to use a yarn less than 210 denier or that it would cause inoperability. Paragraphs 0027 and 0028 of the Toray translation set an upper limit of 500 denier and a lower limit of 210 denier, respectively. Paragraph 0028 clearly points out that in order to satisfy mechanical properties of the base fabric practically, as a minimum, it is desirable that the fineness be 210 denier. Toray recognizes that an air bag is designed as a safety device. It is impractical, where a person's life is at stake, to reduce fineness below 210 denier and risk failure of the air bag at the critical time of a crash.

The Examiner's position is thus pure conjecture. It is contrary to what a skilled artisan would conclude from Toray's teaching, namely, that 210 denier is the absolute minimum.

Second Meritless Challenge

The Examiner also challenges in the third through fifth paragraphs on page 8, whether the claims exclude Toray by reciting that the product of fineness of either warp

or weft multiplied by weave density is not more than 16,000 decitex•end or pick, respectively, /2.54 cm.

As the Examiner points out, Toray discloses in paragraph 0057 a weave density equal to or greater than 50 filaments per inch for the warp and weft. Although not identified by the Examiner, the yarn is said in this same paragraph to have a fineness of 420 denier. A product of fineness multiplied by the weave density is 23,500 dTex end/2.54 cm, well above the claimed upper limit, thus excluding Toray. The Examiner has not pointed to any instances in Toray where the product of fineness multiplied by the weave density is equal to or less than the claimed 16000 dTex end/2.54 cm.

Third Meritless Challenge

In the first full paragraph on page 9 of the Examiner's Answer, the Examiner argues that various disclosures in Appellants' specification are obvious and such alleged obviousness makes further obvious the selection of a desired tensile work at break and load at 15% elongation. This argument not only attempts to use Appellants' disclosure against them but also completely avoids recognition of the discovery of tensile work at break and its significance in the making of the claimed air bag. The significance of the discovery of tensile work at break and the claimed range of load at 15% elongation of the fabric are discussed in section IA and IB of the Appeal Brief and need not be repeated.

In the present invention, an effective deployment of an air bag requires that the tensile work at break of the fabric be in the range of 7000 to 30000 N•%/2.54 cm and a load at 15% tensile elongation be in the range of 3 to 35 N/%/2.54 cm.

When the yarn is too fine as shown in Exhibit 2, Comparative Example 3 (CE3), an air bag with high strength and elongation cannot be obtained because the claimed tensile work at break of 7000 to 30000 N•%/2.54 cm is not satisfied, and the air bag breaks during deployment. Also, in Comparative Example 4 (CE4), because the yarn is thick, while the tensile work at break may be satisfied, the product of fineness multiplied by the weave density is not satisfied. The resulting air bag obtained is heavy, has insufficient compactness, and is difficult to fold. The size of the air bag after folding is unsatisfactorily large.

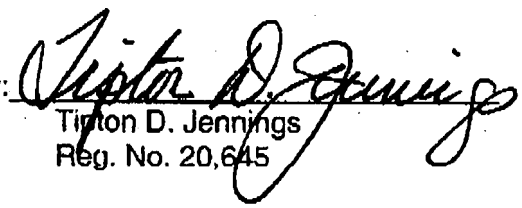
For the reasons given above and in the Appeal Brief, pending claims 9-20 are allowable, and reversal of the Examiner's rejection is respectfully requested.

To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this Reply Brief, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16, 1.17, or 41.20 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: September 14, 2007

By: 
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